IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): An encryption processing apparatus configured to perform a data encryption process, said encryption processing apparatus comprising:

a processor configured to provide:

a control section configured to set a mixed encryption processing sequence by dividing an original encryption processing sequence into a plurality of groups, each group being composed of ~~one or more~~ a plurality of encryption processing units, each encryption processing unit being a defined process, each group being a separate and independent encryption process for encrypting an input data, where the input data to be encrypted for a first group [[one]] of the groups is different relative to the input data to be encrypted for a second group of the groups, and the input data to be encrypted for the first group is generated independently relative to the input data to be encrypted for the second group ~~another one of the groups~~, said control section mixing processing sequences of encryption processing units of the plurality of groups with each other by ~~inserting at least one encryption processing unit from one of the groups between encryption processing units from another one of the groups so that~~ executing performance of at least one encryption processing unit from ~~one of the groups is performed~~ the first group at a time between executing performance of encryption processing units from the second group ~~another one of the groups~~ and under a condition in which a processing sequence of the encryption processing units within each of the plurality of groups is fixed; and

an encryption processing section configured to perform an encryption process in accordance with the mixed encryption processing sequence set by said control section.

Claim 2 (Currently Amended): [[An]] The encryption processing apparatus according to Claim 1, wherein each group includes a triple-DES encryption process and said control section is configured to set a dummy single-DES process as a dummy encryption process that is unnecessary for an encryption processing sequence in at least one of said groups, and set the number of dummy single-DES processes to be a multiple of 3, and wherein said control section is configured to set a dummy encryption processing unit that performs the dummy encryption process in at least one of the groups, and set one mixed encryption processing sequence by mixing the encryption processing units of a plurality of groups containing the dummy encryption processing unit.

Claim 3 (Currently Amended): [[An]] The encryption processing apparatus according to Claim 1, wherein said control section is configured to determine a group of sequences, which can be performed independently of each other, within the original encryption processing sequence to be divided in a process of division into the plurality of groups, and perform a process for setting a group of divisions in which each of the sequences in the group of sequences can be performed independently as a unit.

Claim 4 (Currently Amended): [[An]] The encryption processing apparatus according to Claim 1, wherein said encryption processing unit is a single-DES encryption process, and wherein said control section is configured to set the mixed encryption processing sequence by dividing the original encryption processing sequence containing one or more single-DES encryption processes into a plurality of groups composed of one or more single-DES encryption processes and by mixing the single-DES encryption processing units contained in each group by mutual replacement of the single-DES encryption processing

units of each set group under the condition in which the processing sequence within each set

group is fixed.

Claim 5 (Currently Amended): [[An]] The encryption processing apparatus according

to Claim 1, wherein said control section is configured to perform a process for dividing the

encryption processing sequence into a plurality of groups composed of one or more

encryption processing units by using a single-DES encryption process which forms a triple-

DES encryption process as an encryption processing unit.

Claim 6 (Currently Amended): [[An]] The encryption processing apparatus according

to Claim 1, wherein the original encryption processing sequence to be mixed is an encryption

processing sequence including a random-number generation process, and

said control section is configured to form a random-number generation process as a

process including a conversion process by three single-DES processes, and sets the three

single-DES processes as a random-number generation process in one of the groups of

divisions.

Claim 7 (Canceled).

Claim 8 (Currently Amended): [[An]] The encryption processing apparatus according

to Claim 1, wherein said encryption processing apparatus has a memory for storing

processing results of the encryption processing units which form the mixed encryption

processing sequence set by said control section, and

said control section is configured to store the processing results in said memory ~~in~~

~~such a manner as to be capable of identifying~~ to identify which encryption processing unit the

processing results are obtained from.

Claim 9 (Currently Amended): An encryption processing apparatus configured to

perform a data encryption process, said encryption processing apparatus comprising:

a processor configured to provide:

a control section configured to set a mixed encryption processing sequence by

dividing an original encryption processing sequence into a plurality of groups, each group

being composed of a plurality of ~~which include one or more~~ encryption processing units, each

encryption processing unit being a defined process, each group being a separate and

independent encryption process for encrypting an input data, where the input data to be

encrypted for a first group [[one]] of the groups is different relative to the input data to be

encrypted for a second one of the groups and the input data to be encrypted for the first group

is generated independently relative to the input data to be encrypted for the second group

~~another one of the groups~~, said control section adding dummy encryption processing units as

encryption processing units to at least one of the groups that performs dummy encryption

processes that are unnecessary for the original encryption processing sequence, and said

control section performing a mixing of processing sequences of the encryption processing

units of the plurality of groups with each other by ~~inserting at least one encryption processing~~

~~unit from one of the groups between encryption processing units from another one of the~~

~~groups so that~~ executing performance of at least one encryption processing unit from ~~one of~~

~~the groups is performed~~ the first group at a time between executing performance of

encryption processing units from another one of the groups; and

an encryption processing section configured to perform an encryption process in

accordance with the mixed encryption processing sequence set by said control section.

Claim 10 (Currently Amended): [[An]] The encryption processing apparatus

according to Claim 9, wherein an encryption processing unit contained in said original

encryption processing sequence is a single-DES encryption process,

said control section is configured to set said dummy encryption processes as single-

DES encryption processes and

wherein said control section is configured to set the number of dummy encryption

processes to a multiple of 3.

Claim 11 (Currently Amended): An encryption processing method, implemented on

an encryption processing apparatus, for performing a data encryption process, said encryption

processing method comprising:

dividing, at the encryption processing apparatus, an original encryption processing

sequence into a plurality of groups, each group being composed of one or more a plurality of

encryption processing units, each encryption processing unit being a defined process, each

group being a separate and independent encryption process for encrypting an input data,

where the input data to be encrypted for a first group [[one]] of the groups is different relative

to the input data to be encrypted for a second group of the groups, and the input data to be

encrypted for the first group is generated independently relative to the input data to be

encrypted for the second group another one of the groups;

setting, at the encryption processing apparatus, a mixed encryption processing

sequence by mixing processing sequences of encryption processing units of the plurality of

groups with each other by inserting at least one encryption processing unit from one of the

~~groups between encryption processing units from another one of the groups so that~~ executing

performance of at least one encryption processing unit from ~~one of the groups is performed~~

the first group at a time between executing performance of encryption processing units from

another ~~one of the groups~~ the second group and under a condition in which a processing

sequence of the encryption processing units, set in said dividing, within each group is fixed;

and

performing, at the encryption processing apparatus, an encryption process in

accordance with the mixed encryption processing sequence set in said setting.

Claim 12 (Currently Amended): [[An]] The encryption processing method according

to Claim 11, wherein each group includes a triple-DES encryption process and said dividing

includes setting a dummy single-DES process as a dummy encryption process that is

unnecessary for the original encryption processing sequence in at least one of said groups,

and setting the number of single-DES processes of dummies to be set to a multiple of 3, said

method further comprising:

setting a dummy encryption processing unit that performs the dummy encryption

process in at least one of the groups, and

setting the mixed encryption processing sequence by mixing the encryption

processing units of a plurality of groups containing said dummy encryption processing unit

~~units~~.

Claim 13 (Currently Amended): [[An]] The encryption processing method according

to Claim 11, wherein said dividing determines a group of sequences, which can be performed

independently of each other, within the original encryption processing sequence to be divided

in a process of division into the plurality of groups, and performs a process for setting a group

of divisions in which each of the sequences in the group of sequences can be performed

independently as a unit.

Claim 14 (Currently Amended): [[An]] The encryption processing method according

to Claim 11, wherein each of said encryption processing units is a single-DES encryption

process,

said dividing divides the original encryption processing sequence containing one or

more single-DES encryption processes into a plurality of groups composed of one or more

single-DES encryption processes, and

said setting sets one mixed encryption processing sequence by mixing the single-DES

encryption processing units contained in each group by mutual replacement of the single-

DES encryption processing units of each set group under the condition in which the

processing sequence within each set group is fixed.

Claim 15 (Currently Amended): [[An]] The encryption processing method according

to Claim 11, wherein

said dividing performs a process for dividing the encryption processing sequence into

a plurality of groups composed of one or more encryption processing units with a single-DES

encryption process which forms a triple-DES encryption process being an encryption

processing unit.

Claim 16 (Currently Amended): [[An]] The encryption processing method according

to Claim 11, wherein the original encryption processing sequence to be mixed is an

encryption processing sequence including a random-number generation process, and

said encryption processing method further comprises forming a random-number

generation process as a process including a conversion process by three single-DES processes

and setting the three single-DES processes as a random-number generation process in one of

the groups.

Claim 17 (Canceled).

Claim 18 (Currently Amended): [[An]] The encryption processing method according

to Claim 11, further comprising:

storing processing results in a memory for storing processing results of the encryption

processing units which form the mixed encryption processing sequence in such a manner as

to be capable of identifying to identify which encryption processing unit the processing

results are obtained from.

Claim 19 (Currently Amended): An encryption processing method, implemented on

an encryption processing apparatus, for performing a data encryption process, said encryption

processing method comprising:

dividing, at the encryption processing apparatus, an original encryption processing

sequence, into a plurality of groups, which include one or more each group being composed

of a plurality of encryption processing units, each encryption processing unit being a defined

process, each group being a separate and independent encryption process for encrypting an

input data, where the input data to be encrypted for [[one]] a first group of the groups is

different relative to the input data to be encrypted for a second group of the groups, and the

input data to be encrypted for the first group is generated independently relative to the input

data to be encrypted for the second group another one of the groups,

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setting, at the encryption processing apparatus, a mixed encryption processing

sequence by adding dummy encryption processing units as encryption processing units to at

least one of the groups, the dummy encryption processing units performing dummy

encryption processes that are unnecessary for the original processing sequence and by mixing

processing sequences of the encryption processing units of the plurality of groups with each

other by ~~inserting at least one encryption processing unit from one of the groups between~~

~~encryption processing units from another one of the groups so that~~ executing performance of

at least one encryption processing unit from ~~one of the groups is performed~~ the first group at

a time between executing performance of encryption processing units from the second group

~~another one of the groups~~; and

performing, at the encryption processing apparatus, an encryption process in

accordance with said mixed encryption processing sequence.

Claim 20 (Currently Amended): [[An]] The encryption processing method according

to Claim 19, wherein an encryption processing unit contained in said original encryption

processing sequence is a single-DES encryption process,

said setting sets said dummy encryption processes as a single-DES encryption

process, and

wherein said dividing includes setting the number of dummy encryption processes to

a multiple of 3.

Claim 21 (Currently Amended): A computer readable storage medium encoded with

computer executable instructions, which when executed by a computer, cause the computer to

perform a method comprising:

dividing an original encryption processing sequence into a plurality of groups, each group being composed of one or more a plurality of encryption processing units, each encryption processing unit being a defined process, each group being a separate and independent encryption process for encrypting an input data, where the input data to be encrypted for [[one]] a first group of the groups is different relative to the input data to be encrypted for a second group of the groups, and the input data to be encrypted for the first group is generated independently relative to the input data to be encrypted for the second group another one of the groups;

setting a mixed encryption processing sequence by mixing processing sequences of encryption processing units of the plurality of groups with each other by inserting at least one encryption processing unit from one of the groups between encryption processing units from another one of the groups so that executing performance of at least one encryption processing unit from one of the groups is performed the first group at a time between executing performance of encryption processing units from another one of the groups the second group and under a condition in which a processing sequence of the encryption processing units, set in said dividing, within each group is fixed; and

performing an encryption process in accordance with the mixed encryption processing sequence set in said setting.

Claim 22 (Currently Amended): A computer readable storage medium encoded with computer executable instructions, which when executed by a computer, cause the computer to perform a method comprising:

dividing an original encryption processing sequence, into a plurality of groups which each include one or more a plurality of encryption processing units, each encryption processing unit being a defined process, each group being a separate and independent

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encryption process for encrypting an input data, where the input data to be encrypted for

[[one]] a first group of the groups is different relative to the input data to be encrypted for a

second group of the groups, and the input data to be encrypted for the first group is generated

independently relative to the input data to be encrypted for the second group; another one of

the groups

 setting a mixed encryption processing sequence by adding dummy encryption

processing units as encryption processing units to at least one of the groups, the dummy

encryption processing units performing dummy encryption processes that are unnecessary for

the original processing sequence and by mixing processing sequences of the encryption

processing units of the plurality of groups with each other by inserting at least one encryption

processing unit from one of the groups between encryption processing units from another one

of the groups so that executing performance of at least one encryption processing unit from

one of the groups is performed the first group at a time between executing performance of

encryption processing units from the second group another one of the groups; and

 performing an encryption process in accordance with said mixed encryption

processing sequence.